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This is the equation of the curve described by the dog, and it is called the "Curve of pursuit." When the dog overtakes the hare, $y=0$, $x=ON=b$. $\therefore$ (12) becomes, $\frac{na}{n^2-1}=b$....(13). Solving (13) as a quadratic in n, we have, $n=\frac{1}{2b}(a\pm\sqrt{4b^2+a^2})$, or $n=1.0644+$. Substituting this value of n in (2), remembering that when the dog overtakes the hare, $EP=s$, $x=320$, $y=0$, we have, $s=1.0644\times 320=340.624+$ rods.

PROBLEMS.

33. Proposed by Professor ALEXANDER ROSS, C. E., Sebastopol, California.

From a point P without a rectangular field ABC, the distances PA, PB, and PC measured to the corners are, respectively, 70, 40, and 60 chains. What is the area of the field?

34. Proposed by THOS. U. TAYLOR, C. E., M. C. E., Department of Engineering, University of Texas, Austin, Texas.

Given a variable parrallelogram $ABCP$, where P remains fixed. A moves on an irregular plane curve (closed) and C moves on another plane curve (closed) whose plane is parallel to the plane of (A) curve. The generator PC moves completely around and returns to its initial position, AB always moving parallel to PC, and, of course, returns to its initial position. If distances between planes (A) and $(C)=h$, show by elementary mathematics and without using theorem of Koppe that volume of solid generated by variable parallelogram $ABCP=\frac{1}{2}h$ (area generated by $AP+$ area generated by BC).

QUERIES AND INFORMATION.

Conducted by J. M. COLAW, Monterey, Va. All contributions to this department should be sent to him.

SPACE.

Space is an entity, outside of the human mind, extended in three directions at right angles to each other, continues, immaterial, immmovable, inflexible and illimitable. It is an entity, sui generis, neither psychical nor physical.

It is cognized but not created by the mind of man and is, doubtless, what it is cognized to be.

A fourth dimension has never been discovered.

Arthur Willink in "The World of the Unseen," pages 90 and 91, locates his hypothetical "Higher Space" in an unknowu direction from our space.